UNION CARBIDE

NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 3 — No. 9 Thursday, June 22, 1972

ORAU, ORNL & AEC lecture series planned during June and July

Oak Ridge Associated Universities and Oak Ridge National Laboratory are presenting seven lectures during June and July for student and faculty visitors to the city under various Oak Ridge summer research - participation and training programs.

The weekly series, which is being conducted for the fourth year by the ORAU University Programs Office and the Office of Education-University Relations at ORNL, began June 14 and will continue through July 26.

Lectures will be given each Wednesday at 7 p.m. at the Oak Ridge Playhouse, Jackson Square, with members of the ORAU, ORNL, and local AEC staffs presenting five of the seven talks.

Two outside speakers on this year's program are Elliot S. Pierce, director of the Division of Nuclear Education and Training, AEC Headquarters; and Joseph H. Hamilton, professor of physics at Vanderbilt University, who is chairman of the executive committee for the new University Isotope Separator — Oak Ridge (UNISOR) facility at ORNL.

The lectures are open to the general public as well as Oak Ridge summer visitors, and there is no charge or ticket for admission.

Remaining lectures in the series include:

June 28 — "The University Isotope Separator — Oak Ridge: A New Cooperative Venture," Joseph H. Hamilton, professor of physics, Vanderbilt University.

July 5 — "Toward a National Energy Policy: Implications for the 70's," Eric Hirst, staff member, ORNL-NSF Environmental Program; and Don Steiner, coordinator, fusion reactor technology studies, Thermonuclear Division, ORNL.

July 12 — "Technology: Master, Slave, or Partner?" Elliot S. Pierce, director, Division of Nuclear Education and Training, AEC Headquarters.

July 19 — "Population Research: Why? How?" Melvin M. Ketchel, director, Oak Ridge Population Research Institute, ORAU.

July 26 — "The Anatomy of an Environmental Impact Statement," Roger Cloutier, medical physicist, ORAU, panel moderator; Roy E. Thoma, James Curlin, and Liane B. Russell, ORNL; Peter Cohan, Cooperative Science Education Center.

July 4th holiday

Tuesday, July 4th, is another official holiday for Nuclear Division employees, as the nation celebrates its 196th birthday.

No employee in Oak Ridge or Paducah will be required to be at work unless his presence is required for continuous operation or security.

QUESTION BOX

QUESTION: When will the Company Pension Plan be improved? It is now one of the poorest plans among large corporations in the country.

ANSWER: Union Carbide Corporation's Pension Plan was improved significantly in 1969. It is not likely to be changed in the near future. Contrary to your statement, the Pension Plan compares favorably with most other plans which are financed entirely by the company. Those having better pensions usually have plans calling for employee contributions as well. For example, AEC employees contribute 7.5% of earnings to their retirement benefits.

Estimated monthly retirement income for a Nuclear Division employee who retires at age 65, with a wife the same age, after 30 years' service, is shown below for various income levels:

Final Monthly Earnings	Pension	Social Security Benefits	Total Retirement Income
$ 600	$182	$307	$489
800	242	322	564
1000	309	322	631
1500	495	322	817
2000	580	322	902

"After tax" comparisons are even more favorable, as shown below:

	BEFORE RETIREMENT			AFTER RETIREMENT		
Final Monthly Earnings	Fed. Tax	Average Monthly FICA	Net	Pension & Social Sec.	Fed. Tax	Net
$ 600	$ 66	$31	$ 503	$489	$—	$489
800	98	39	663	564	—	564
1000	136	39	825	631	—	631
1500	255	39	1206	817	26	791
2000	398	39	1563	902	41	861

Nuclear Division employees, particularly those whose earnings are in excess of the social security base, are encouraged to utilize the Personal Savings Account portion of the Savings Plan, and to purchase U. S. Savings Bonds through the Payroll Savings Plan as ways of supplementing their retirement income.

QUESTION: Does the management of Union Carbide have a policy concerning the displaying of pictures such as Playboy calendars, nudes, etc. in offices and laboratories at the plants? Isn't it possible that visitors, prospective employees (especially women) and certain regular employees might be embarrassed and offended by this type of material?

ANSWER: Decisions of this nature are usually left to supervisory discretion. If you find a display in your area offensive, it is suggested that you discuss this with supervision.

If you have a question on company benefits, policies, etc., just drop it in the mail to the Editor, Nuclear Division News, Building 9704-2, Y-12. You may or may not sign your name. It will not be used in the News.

Questions are referred to the proper authority for as accurate an answer as possible. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

55 youths participate in Nuclear Division's opportunity program

Fifty-five young people from 17 communities will work this summer under the Youth Opportunity Program at the Oak Ridge facilities operated by Union Carbide Corporation for the U. S. Atomic Energy Commission.

The Youth Opportunity Program is for persons between the ages of 18 and 21 who are either high school graduates, or students planning to continue their education either in college, business, vocational, or training schools.

Twenty-eight participants will work at the Oak Ridge National Laboratory, 16 at the Oak Ridge Gaseous Diffusion Plant, and 11 at the Oak Ridge Y-12 Plant.

A breakdown of participants is as follows: Knoxville, 16; Clinton, Harriman, Oliver Springs and Sweetwater, four each; Alcoa, Loudon and Oak Ridge, three each; Coalfield, Kingston, Maryville, Oakdale and Powell, two each; and Heiskell, Johnson City, Lake City and Rockwood, one each.

This is the seventh year that Union Carbide's Nuclear Division has participated in the program. Early this year, Union Carbide's Central Employment staff members worked with guidance counselors in several counties to find suitable candidates for the program.

$400,000 contracts let

Contracts totaling approximately $400,000 have been awarded by Union Carbide Corporation's Nuclear Division for materials and equipment to be used at the Oak Ridge facilities.

Tennecomp Systems, Inc., of Oak Ridge, was awarded a contract totaling $36,490 for the purchase of a pulse height analysis system for the Van de Graaff facility at the Oak Ridge National Laboratory.

A $133,560 contract was awarded the Scientific Engineering and Manufacturing Company, North Hollywood, Calif. This order covers the purchase of thermocouple material and thermocouple assemblies for the Fast Flux Test Facility and Liquid Metal Fast Breeder Reactor Programs.

Scott Machine Tool Company, Atlanta, was awarded a contract totaling $209,997 for the manufacture of a horizontal spindle boring machine.

NUCLEAR DIVISION SAFETY SCOREBOARD

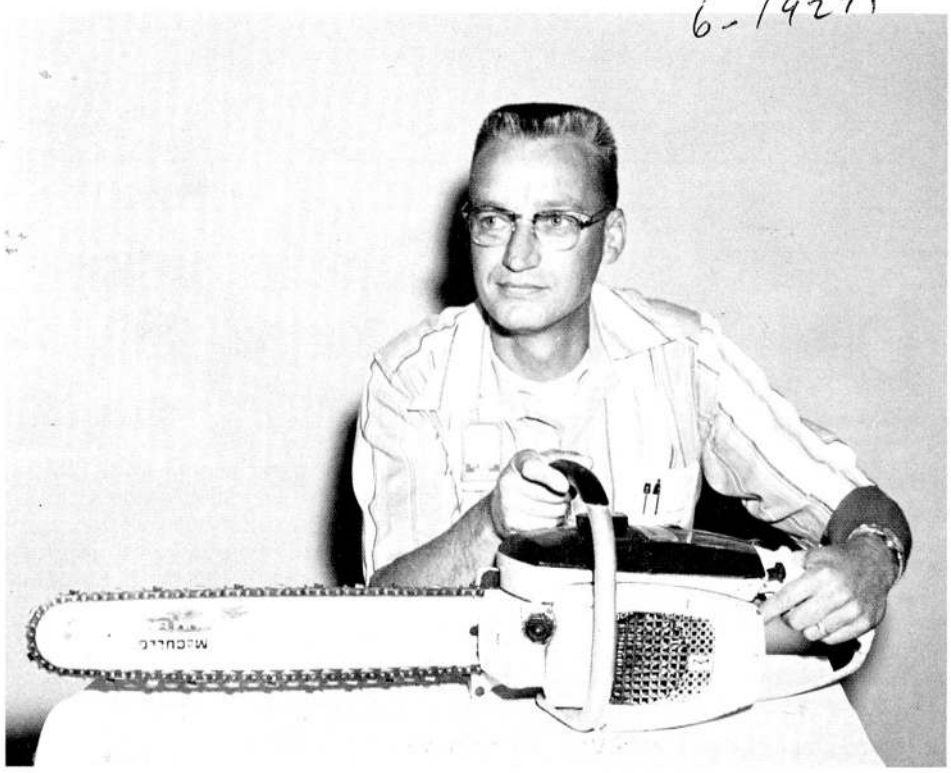
Time worked without a lost-time accident through May 25:

ORGDP	64 Days	901,000 Man-Hours
ORNL	65 Days	1,201,977 Man-Hours
Paducah	85 Days	532,000 Man-Hours
Y-12	240 Days	8,947,000 Man-Hours

Safety is everyone's concern!

More off-the-job accidents highlight painful injuries to personnel

Four more off-the-job accidents are described in this issue, showing how accidents can happen when we least expect them. A representative from each of the Nuclear Division plants shares his experiences with fellow employees.



MAN WITH A SAW—Albert V. Bailey, Y-12's Dimensional Inspection, lost only a week from work because of a chain saw accident, but came close to losing much more than that. He cut himself across the middle of his face (close examination reveals the scar!) with the automatic chain saw, only an inch from his eyes and his brain.

Chain saw accident brings Y-12er to brink of tragedy, an inch away from eyes and brain!

Albert V. Bailey, Y-12's Dimensional Inspection, has always had a healthy respect for a chain saw. He has even more today.

It was one of those light, unexpected snows last winter that brought out Bailey's desire for a big fire in the fireplace. On arising, however, he found he was a little short of firewood, and even had some stored away that was too long for the fireplace.

Operation of a chain saw was not new to the Y-12er. He had purchased the saw more than a year before the accident, and had used it many times. He was making the first cut and when the cutting edge broke through the bottom side of the log, the chain caught on a splintered area of the bottom log. This caused the blade of the saw to kick back and strike Bailey in the face. The back side of the bar, over which the chain and saw teeth move, struck him square on the nose. The laceration was all the way through his nose and even split his upper lip. The cutting action of the saw was deflected away from his face when the chain struck the bridge of his safety glasses, which probably averted an even more serious injury.

"When I saw the amount of blood," Bailey recalls, "I immediately recalled that cold compresses are used to stop severe nose bleeds; so I picked up a handful of snow and applied it to the open wound. Doctors would, however, question the beneficial effects of this move, since you are increasing the risk of infection with the introduction of foreign matter to an open wound. Mrs. Bailey came to help and applied a cloth over the wound. We used the cloth as a compress while we drove to St. Mary's Hospital, almost 15 minutes away."

A plastic surgeon performed corrective surgery on Bailey's nose that day. The surgery leaves little evidence of the accident which had every potential of being a genuine tragedy. If the blade of the saw had struck an inch off in either direction, it could have easily resulted in the loss of an eye or more extensive head injuries.

Bailey, on reflection, sees where he let his guard down. He knew that he was supposed to hold the blade or bar of the saw with a stiff right arm. However, he compromised his better judgment and safety awareness because the job was only going to take a minute or so; and he was in a hurry to get back into the house since he was not dressed for cutting wood in the snow.

The Y-12er stated that he remembered many safety messages from meetings in the plant. "But you never think things like that will happen to you. They're supposed to happen to the other fellow. But this time it was me."

"Not even for a minute, or a second," he advises, "should we let expediency replace common sense."

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'More pain from this than any other thing that ever happened to me,' says lawnmower victim

Ruby Burrell, ORNL's Solid State Division, relates that her lawn mower accident which she had last summer is just "something you never think will happen to you."

One Saturday last summer Ruby and her husband Bob were working in their yard at their home in Oak Ridge. Ruby says she has always enjoyed mowing and had started mowing the lawn that morning. The grass was dry and Ruby was wearing heavy socks and high topped tennis shoes with heavy rubber soles.

'Terrible noise'

Suddenly Ruby says, "My foot slipped and I fell on my back. It all happened so fast I really don't know what happened. I must have pushed my foot underneath the mower when I fell. I heard a terrible noise and then silence. There was no feeling in my foot. I sat up and realized those were my toes on the ground. That terrible noise had been the mower blade cutting through my shoes and bones.

"The thought went through my mind that doctors can sometimes restore limbs that have been cut off. I certainly hoped he could sew my toes back on and picked them up to take to the hospital.

"I was in Oak Ridge Hospital within 20 minutes after the accident. I had a wonderful doctor, but all he could do for me was clean up the wounds and trim the mangled bones in my foot. My big toe and two others were lost.

Always aware of safety

"I had more pain from this than anything else which has ever happened to me. I was off work for over three months and on crutches for some time. And of course, I've had adjustments to make. The loss of the toes affects my balance. I have to walk slower than I used to, and I can't comfortably wear shoes with very much heel.

"We have always been safety conscious at home. My husband always wears safety shoes when he mows and we always made sure that our sons wore them when they did yard work. I knew I should get some safety shoes for myself, but I put it off. I might still have my toes if I had gotten the shoes.

'Wear safety shoes'

"I hope the story of my accident will help someone who has been putting off getting safety shoes or who thinks such an accident would never happen to him. There wasn't really any carelessness involved. I just slipped and fell.

"My advice is to wear safety shoes when you mow and see that your children do. And check your lawn carefully for sticks, stones, wire, holes or anything that might affect your mowing or cause an accident.

'Diving is fun,' says young man from ORGDP, 'but always look before you leap,' he advises

Name a water sport, and you have half a million East Tennesseans involved in a big way, about six months out of the year.

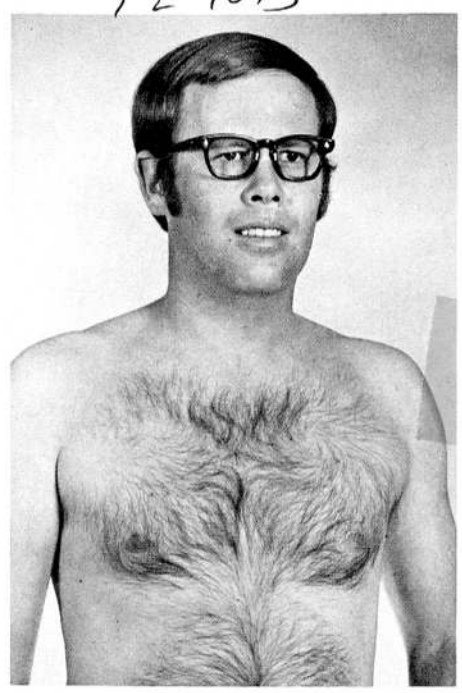
Jimmy T. Bryson, who works in the Laboratory Division at ORGDP, likes swimming as well as the next. He has, however, a word of caution for swimmers. "Look before you leap."

Bryson was swimming with his family in the Citico Creek area on a balmy summer's day without too many worries. He soon fixed that, however, giving himself and his folks plenty to worry about.

"I dived into about four feet of water and struck the rocks on the bottom, splitting my face wide open," he relates. "My nose was fractured and I had a deep laceration of my upper lip. The closest doctor was 20 miles away which was my immediate concern. We stopped the bleeding with towels, but, believe me, I was plenty shaken up by the sight of that much blood."

Bryson's injury cost him only two weeks away from his job, but the pain of a broken nose made up for the shortness of time off the job. "Stitching about the face is not the most pleasant thing on earth," Bryson says.

Swimming in unfamiliar water is asking for trouble, and diving into shallow water is a sure ticket to an injury. Bryson points out that diving is fun, and the next time he does it, he will make sure the water is deep enough!



TAKES DIVE — Jimmy T. Bryson, ORGDP's Laboratory Division, advises fellow employees to check water before taking a dive. He suffered a nose fracture from a dive into shallow water.

(Additional story on page eight.)

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BOUNCED BEAM—A helium-neon beam bounced against a machined, spherical surface and reflected onto a screen provides a magnified image of the workpiece surface. The system, developed by Harry C. Corey, of the Y-12 Plant's Fabrication Systems Development, permits an optical evaluation of a workpiece while avoiding possible damage that might be caused by conventional inspection gages.

Helium-neon laser evaluates surface finish of spherical parts to range of 10 microinches

The Y-12 Plant has developed an optical method of evaluating the surface finish of machined, spherical parts over the range of one to 10 microinches (a microinch is one-millionth of an inch).

The method, developed by Harry S. Corey, Fabrication Systems Development, employs a helium-neon laser and a reflective screen. The laser beam is aimed through a one-half-inch diameter hole in the screen to strike the metal workpiece being inspected. The light reflected from the work piece is projected onto the screen to provide a magnified view of the surface.

The magnified reflection permits a detailed inspection of the workpiece while avoiding possible damage that might be caused by touching the workpiece surface with conventional inspection gages.

Engineering details of the system are being made available through the Industrial Cooperation Program.

Patents Received

To **Iran L. Thomas,** ORNL, for a "Method for Exchanging Conterions in Actinide Oxide Sols."

Credit unions sponsor 17-day European tour

You had better start making your plans for the 17-day European holiday scheduled for early fall under the sponsorship of the Oak Ridge Credit Unions.

For complete details on the trip, a brochure has been prepared and is yours for the asking at your credit union. If you missed previous meetings and announcements, pick up your brochure now. It's not too late.

The trip, which departs from and returns to Knoxville, and the tour package are sponsored by all the Oak Ridge Credit Unions. However, the tour is not limited to members.

Don't hesitate. Get the brochure and share it with your friends. You might wind up in Europe for 17 days.

Y-12 technician gives Texas ultra-clean talk

Charles E. McAlister, a technician in Y-12's Chemistry Development Department who assisted in the preflight cleaning of the moonboxes and auxiliary equipment used in the Apollo moon landing missions, described cleaning procedures at a technical meeting in Texas recently.

His talk "Ultra Cleaning for the Apollo Program" was given before the American Society of Certified Engineering Technicians in Houston June 28-July 2.

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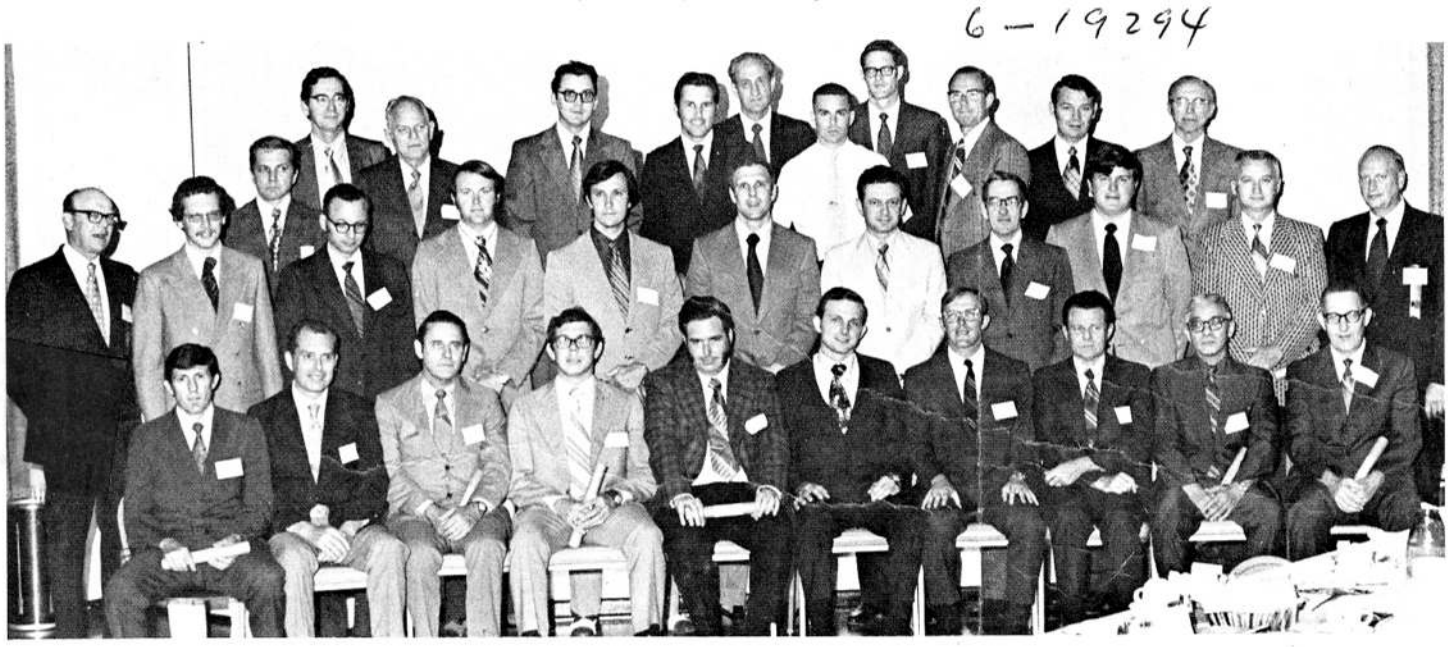

NOW LICENSED—30 Nuclear Division engineers recently received professional engineering license certificates at the meeting of the Oak Ridge chapter of the Tennessee Society of Professional Engineers. Seated from left are T. S. Kress, J. W. Hill, J. M. Baker, R. D. Bryant, H. N. Rosenberg, J. H. Corley, D. J. Eiler, C. A. Trotman, I. K. Namba and H. W. Zang. Standing in the second row, P. C. Fourney, manager of General Industrial Relations who was a special guest; N. W. Durfee, M. H. Fontana, R. E. Phillips, L. M. Cuddy, J. F. Felte, H. D. Guberman, W. R. Ellis, S. M. O'Neal, R. R. Stephens, and P. R. Vanstrum, vice president of the Nuclear Division. In the back row are D. P. Dash, R. M. Kemper, E. F. Babelay, B. K. Miles, W. J. Leggins, B. E. Cooper, R. D. Sachs, L. E. Galyon, A. C. Morris, R. L. Davis and B. Zimmerman. Vanstrum spoke to the engineers on "Our Challenge in Uranium Enrichment," at the meeting held in the Oak Ridge Country Club.

ORGDP names J. Frank Jamison as Finance & Materials superintendent

The appointment of J. Frank Jamison as Superintendent of the Finance and Materials Division at the Oak Ridge Gaseous Diffusion Plant has been announced by Robert A. Winkel, Plant Superintendent.

In his new position, Jamison will be responsible for budgeting, budget analysis, cost analysis and all material control for the gaseous diffusion plant.

Jamison succeeds William H. Hildebrand who has been given new responsibilities with the General Accounting Division for the Nuclear Division.

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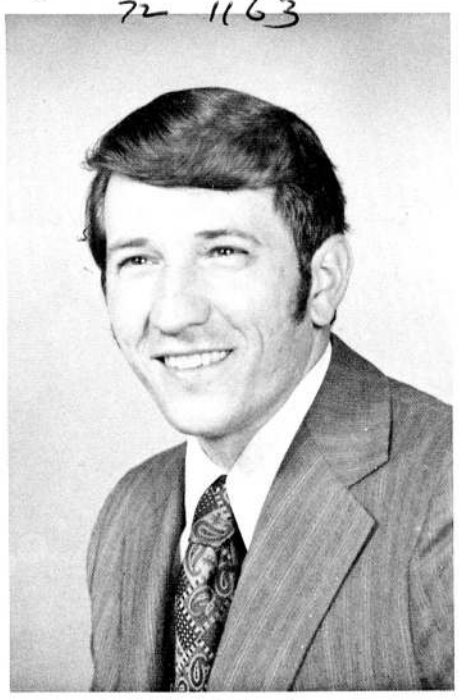

J. Frank Jamison

Jamison, a 32-year-old native of Jackson, Tenn., received his bachelor's degree in mathematics from Union University in Jackson, and his master's degree in mathematics from The University of Tennessee.

He joined the Nuclear Division in 1964 and was assigned to the Nuclear Programming Section of the Computing Technology Center. In 1968 he transferred to the Operations Planning Department in the Operations Division at the gaseous diffusion plant, and the following year he joined the staff of the barrier plant where he served in positions of increasing responsibility.

In 1970 he was named supervisor of the Toll Enrichment facility, and in 1971 he was placed on special assignment with the Finance and Materials Division.

Active in community affairs, Jamison is a member of the Oak Ridge Board of Education.

He is married to the former Ann Jones of Humboldt, Tenn. They and their two children, Curtis S., 10; and Cynthia, seven; live at 104 Andover Circle, Oak Ridge.

Two from ORNL staff added as APS fellows

Two members of the ORNL staff were elected Fellows of the American Physical Society at the annual meeting in Washington earlier this year. Edith Halbert and Leonard J. Nugent were the honorees, bringing the total number of APS Fellows employed at ORNL to 53.

According to the Society's bylaws, Fellows are elected on the basis of their "contribution to the advancement of physics by independent, original research, or having rendered some other special service to the cause of the science which is considered equivalent to such investigations." Fulfillment of these qualifications is usually determined by an examination of the candidate's published works.

Mrs. Halbert, with the Physics Division, received her doctorate from the University of Rochester in theoretical physics. She is currently on assignment with the State University of New York at Stony Brook. Her field of research at the Laboratory has been in low-energy nuclear physics and neutron spectroscopy.

Nugent, a member of the Chemistry Division, received his Ph.D. from the University of Wisconsin. His research at ORNL has been in the study of the electronic structure of the actinides by spectroscopic and theoretical methods. Nugent is the second chemist at the Laboratory to be so honored, the other being Sheldon Datz, associate director of Chemistry Division.

Nuclear safety meet

The next Nuclear Safety Program will be held at 9:15 a.m. July 13 in the 4500 East Auditorium.

F. C. Duvall, vice president and general manager of Training Services at NUS Corporation, will speak on "Utility Environmental Training." A graduate of the U. S. Coast Guard Academy, Duvall also holds a degree from Carnegie Tech. He has had extensive training experience at Duquesne Light Company (Shippingport Atomic Power Station) and with NUS.

DIVISION Retirees

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Butturini Goldenschue

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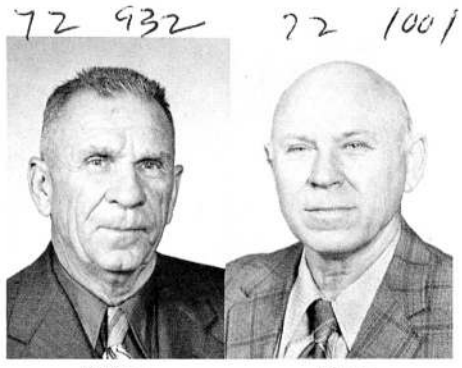

Miller Riggs

Four veteran ORGDP men will retire June 30, marking almost a century of service with Union Carbide.

Charles W. Butturini, Mechanical Services, came with Union Carbide in 1951. He lives at Route 20, Beaver Ridge Road, Knoxville. Charles C. Goldenschue, who came here in 1944, is in Shift Operations and Security. He retires to his 421 New York Avenue, Oak Ridge, home.

Joseph L. Miller lives at Route 1, Harriman. He is a machinist at ORGDP. James V. Riggs, who came with Union Carbide January 22, 1945, is a sheet metal worker.

Y-12

RIDE or will join car pool from Kingston Pike, Lovell Road section, Knoxville, to Bear Creek Portal, H Shift. Richard Miller, plant phone 3-7854, home phone Knoxville 966-1729.

RIDERS from Kingston Woods, Deane Hill, any other subdivision off Kingston Pike between Morell Road and Cedar Bluff Road, to any portal, straight day. Jim George, plant phone 3-7277, home phone Knoxville 588-6474.

RIDE from Edgemoor Road, Miller Apartments, to North or Central Portal, straight day. Glen T. Miller, plant phone 3-5851, home phone Claxton 945-2560.

RIDE from Viking Road, Oak Ridge, to East Portal, straight day. Sarah Coram, plant phone 3-5226, home phone Oak Ridge 483-7534.

ORGDP

RIDE from Garden apartments, Oak Ridge, to Portal Two, straight day. William Robinson, plant phone 3-3053, home phone Oak Ridge 483-5028.

MEMBER for five-man car pool from Karns Community, vicinity of red light, to Portal Four, ORGDP, day shift. Floyd Hipshire Jr., plant phone 3-3031, home phone Knoxville 584-2693.

Next Issue

The next issue will be dated July 13. The deadline is July 5.

ORNL staff attending European conferences

Several ORNL staffers are presenting papers at international meetings in June.

Charles C. Congdon, Biology Division, will attend the Fourth International Conference on Lymphatic Tissue and Germinal Centers in Immune Reactions to be held June 26-30 in Dubrovnik, Yugoslavia. He has been active in the organizational committees work on this conference series.

William T. Milner, Physics Division, will present "Equilibrium Quadrupole and Hexadecapole Deformations in Actinide Nuclei" at the European Conference on Nuclear Physics to be held at Aix-en-provence, France, June 26-July 1.

Raymond E. McHenry will present a paper, "Curium-244 — A Radioisotopic Power Fuel," at the Second International Symposium on Power from Radioisotopes in Madrid, Spain.

Claire Nader, associate director of the ORNL-NSF Environmental Program, will be an invited participant in the Symposium on National Science Policy, June 9-17 in Sofia, Bulgaria.

Heart attack is fatal to Oscar Cooper, Y-12

Oscar A. Cooper Jr., Y-12 Electrical and Electronics Department, died June 7 at the Oak Ridge Hospital from an apparent heart attack.

Mr. Cooper

Mr. Cooper came to Y-12 October 10, 1960 after working as an electrician for firms in Oak Ridge and Atlanta. He was a native of Powell, and a veteran of the U.S. Navy.

Survivors include his wife Mrs. Anna Mae McCoy Cooper; son, Michael; and daughters Donna, Lisa and Denna, all of the Powell residence. He is also survived by four sisters.

Funeral services were held at Weaver Chapel with interment in Greenwood Cemetery.

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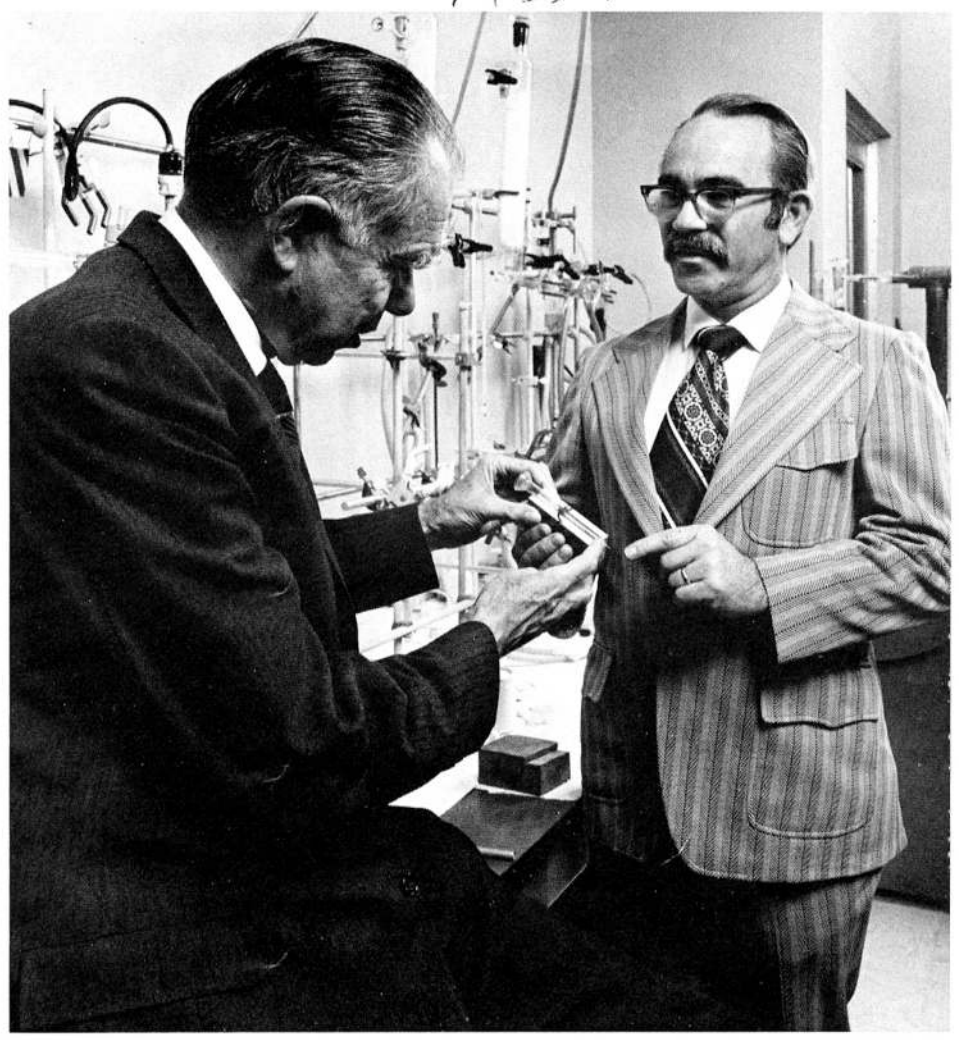

NEW ELEMENTS RESEARCH—Former AEC Chairman Glenn T. Seaborg (left) recently visited Robert Silva at ORNL to discuss the heavy element research which Seaborg is heading up at Lawrence Radiation Laboratory.

Silva to head chemists' committee in search of 'superheavy' material

Robert J. Silva, ORNL Chemistry Division, has been named by Glenn Seaborg, former chairman of the U. S. Atomic Energy Commission, to head up a committee of nuclear chemists whose assigned task is to search for the so-called "superheavy elements," i.e., those predicted elements bearing atomic numbers around 114. These elements are predicted to exhibit new chemical properties that may lead to a better understanding of the atom.

The committee, named the Superheavy Elements Chemistry Group at Lawrence Radiation Laboratory, Berkeley, will use for its studies the new L.B.L. accelerator, the Super HILAC. There is as yet no instrument powerful enough at Oak Ridge to perform the research necessary for this purpose.

The committee, a cooperative effort among the AEC laboratories, comprises two members of Argonne National Laboratory, one from Los Alamos Scientific Laboratory, and two each from Livermore and Berkeley, besides Silva. In addition, a postdoctoral chemist from Sweden and one from Germany will participate.

The superheavy elements, predicted to be relatively stable compared to the highly radioactive transuranium elements, are expected by some to be found by the process of bombarding selected targets with very heavy ions at very high energies. It will be the Superheavy Element Group's task to try to predict the unknown element's chemical behavior, and from this determine the most effective method of separation for its positive identification.

Silva recently returned from Berkeley, where he attended meetings to decide the initial directions of his new group. Also participating from ORNL are Lew Keller, head of ORNL's Transuranium Research Laboratory, and R. D. Baybarz of the Chemical Technology Division. Silva anticipates spending about two-thirds of his time over the next few months at Berkeley in the execution of his new duties.

Silva, who came to Oak Ridge in 1959, was one of Seaborg's last Ph.D. students before Seaborg left Berkeley in 1961 to take his post with the AEC. It is Seaborg's return to academic work at the University of California that has given impetus to the formation of the Superheavy Element Chemistry Group. It is an area of research in which he has long been keenly interested. Seaborg is credited with the discovery of several elements.

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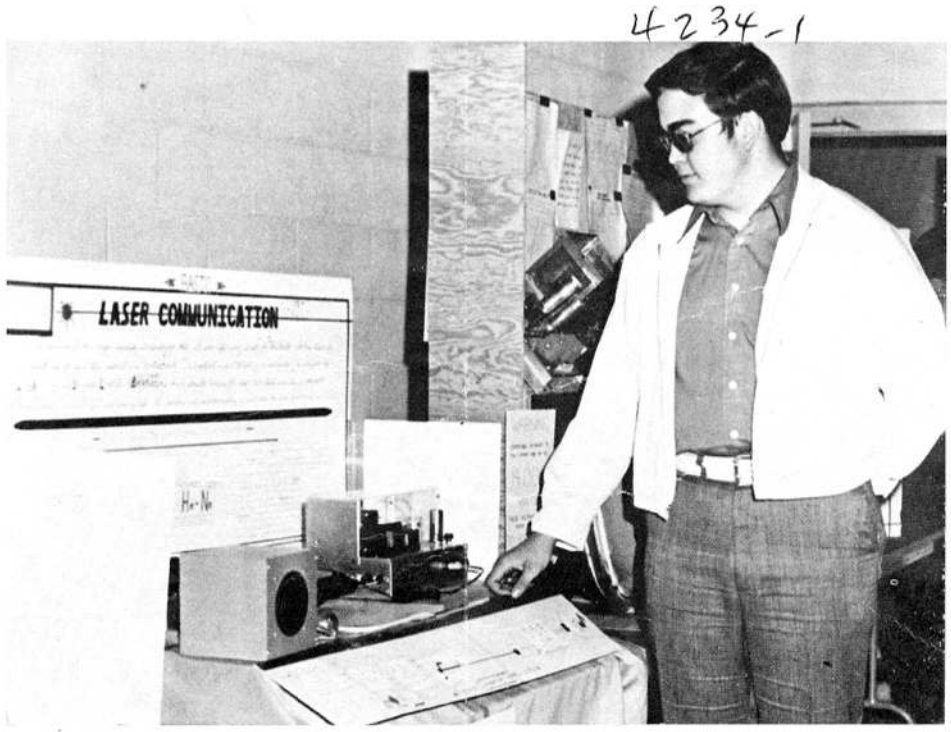


SCIENCE FAIR WINNER—Louis G. Bourgois III, a junior at Lone Oak High School, tied with three other area high school students with his exhibit of Laser Communication entered in the senior high individual division of the physics category in the West Kentucky Regional Science Fair. The fair was staged at Murray State. Louis is the son of George Bourgois Jr., an employee in Fabrication and Maintenance at the Paducah Plant.

AEC movies describe peaceful uses of atomic energy, Geneva conference

Twelve color motion pictures produced especially for the Fourth International Conference on the Peaceful Uses of Atomic Energy in Geneva, Switzerland, last fall are now available for loan to the public from the Atomic Energy Commission.

Following is a description of each film which is available free of charge, except for return postage, from the Motion Picture Film Library, U. S. Atomic Energy Commission, Post Office Box E, Oak Ridge, Tenn. 37830:

"The Bitter and the Sweet," 29 minutes, discusses use of nuclear energy in desalting operations including a treatment of the Agro-Industrial Complex idea.

"Doorway to Diagnosis," 28 minutes, describes progress in development of instrumentation sponsored by the AEC to detect and accurately measure the various manifestations of disease.

"Isotopes in Environmental Control," 14 minutes, shows how radioactive atoms are being used to help man preserve and restore his environment.

"Nuclear Innovations in Process Control," 17 minutes, depicts the great versatility and sophistication of nuclear methods that now are available for control of industrial processes and for nondestructive testing.

"Nuclear Power in the United States," 28 minutes, describes the energy philosophy of the AEC and touches on the entire spectrum of the nuclear power industry including development of the Liquid Metal Fast Breeder Reactor and other advanced reactors.

"Radiation Processing: A New Industry," 14 minutes, provides several examples of how the uses of radiation for industrial processing in the United States have increased rapidly during recent years.

"The Radioisotope - Powered Cardiac Pacemaker," 21 minutes, depicts the entire fabrication and lifetime testing of the nuclear powered cardiac pacemaker and witnesses the complete implantation of the device in a dog at the National Institutes of Health.

"Short-Lived Radioisotopes in Nuclear Medicine," 27 minutes, describes refinements in nuclear medicine which offer the physician a better diagnostic picture faster and with the lowest radiation burden to the patient.

"Space and the Atom," 27 minutes, reports on the many past successes of nuclear energy in space such as radioisotopic generators on recent Apollo lunar flights and outlines efforts to develop a nuclear rocket engine.

"To Develop Peaceful Applications for Nuclear Explosions," 15 minutes, emphasizes the complex laboratory and field research procedures which support (and stringent rules which govern) all nuclear explosive engineering experiments in U.S. "Plowshare" program.

"To Imitate the Sun," 33 minutes, describes the theoretical challenge and research in the controlled fusion concept and discusses the environmental and economic benefits of future fusion power reactors.

"The Zonal Ultracentrifuge," 6 minutes, describes development at Oak Ridge National Laboratory of zonal ultracentrifuge capable of rapid fractionization of large volume of cell constituents—part of man's continuing attack on human diseases.

ORNL's Maintenance names new foremen

Two promotions have been announced at ORNL. William C. Fair and Les D. Quinton were named foremen in the Maintenance Services Department of Plant and Equipment Division.

A native of Knoxville, Fair came to ORNL in 1952. Presently he and his wife and two children, Janice and Roger, live in the West Haven area in Knoxville. He has been active in the Naval Reserve for 19 years. Much of his spare time is spent officiating through the TSSAA at area basketball and football games.

1989-72 1990-72

Fair Quinton

Quinton, a native of Morristown, came to ORNL in 1959. He and his wife Doris live with their three children, Danny, Lesa Deanna and Doug, in the Norwood section of Knoxville. He has been a racing buff since age 14 and now spends much of his spare time rebuilding cars and motorcycles for racing and show. His team has been very successful in winning races and honors.

King daughter takes Mortar Board honors

Anne Todd King, daughter of Campbell R. King, Y-12's Employment, has been honored on The University of Tennessee campus. A junior there Miss King was recently tapped for the Mortar Board, the highest national honor society for women.

Miss King

She has recently been elected rush director of the Panhellenic Council which is the governing body for the 19 social sororities on campus. The council serves as a forum for idea exchange among its members.

Miss King is also a member of the Adawayhi; the Vols Corps; Phi Kappa Phi honorary; Phi Chi Theta business honorary; Kappa Kappa Gamma Sorority and was vice president of her dormitory floor.

Advanced degrees go to ORNL personnel

Several ORNL employees have been the recipients of advanced degrees at recent graduations.

Donald R. Matthws of Analytical Chemistry Division received the Ph.D. in Analytical Chemistry from The University of Tennessee.

William R. Wing of Thermonuclear Division received the Ph.D. in Physics from the University of Iowa.

Donald D. Cannon of General Engineering Division received the M.S. in Engineering Mechanics from The University of Tennessee.

Cynthia Daugherty of Chemistry Division received the M.S. in Chemistry from The University of Tennessee.

1394-72

READY TO TRAVEL—Prior to removal of the mobile facility to the ecology field site, preparations were made for connections to a source of electrical power. Left to right, Francis Rau, Blaine Dinger, Ted Newman, Tom Duff and Charles Abner.

Mobile lab developed at Laboratory to monitor forests in Oak Ridge area

As part of ongoing research within the Analysis of Ecosystems section of the U. S. International Biological Program, a mobile laboratory is being developed by Blaine E. Dinger of ORNL's Environmental Sciences Division. The facility is planned to allow monitoring of photosynthesis and related physiological processes, such as transpiration and related growth processes, in various forest trees in their natural habitat in response to fluctuations in environmental conditions.

Studies of this type are carried out in an attempt to understand those factors and conditions which are limiting in terms of controlling energy fixation by photosynthesis. Knowledge of species response to various conditions can be used in predicting the impact of changing climatic conditions and atmospheric contaminants, as well as conventional timber management practices upon forest productivity.

Presently the laboratory is set up in ORNL's cesium forest. The mobile laboratory is unique in that it allows comprehensive field investigation of plant processes which previously had to be conducted on seedlings in a laboratory environment.

The mobile laboratory was built as a cooperative effort primarily among Plant and Equipment Division, Instrumentation and Controls Division and Environmental Sciences Division.

1398-72

PREPARING THE INTERIOR—Housed within trailer are an infrared gas analyzer and sample selector assembly being adjusted by Francis M. Rau (left) of Instrumentation and Controls Division. Ted Newnam, Plant and Equipment Division, connects power outlets for a series of recorders which will monitor solar radiation, temperature and various other environmental parameters which influence plant carbon dioxide exchange processes.

Oak Ridge safety certificates expiring

Oak Ridge employees in the Nuclear Division are cautioned that their safety award certificates expire June 30. ND personnel gleaned personal gift certificates for 1971's sterling safety performance throughout the entire division.

Paducah Plant's gift certificates expired May 31.

COMPANY SERVICE —20-25-30—

PADUCAH

20 YEARS

V. Lee Ree, Reynard C. Shrewsberry, Alma L. Seaton, John S. Hester, Paul E. Graves, Albert S. Friedmann, M. Eugene Rollins, E. Marie Johnson, John W. Stearns, John R. Swithers.

ORNL

30 YEARS

Warren W. Harris achieved the 30-year mark with Union Carbide today, June 22. A native of Connecticut, he was at Columbia University where he received the A.B. degree when he joined the S.A.M. Laboratory there. He later came to ORGDP and was on their staff until 1968. He transferred to the Molecular Anatomy Program where he heads the electron microscopy work. He and his wife Tessie live at 101 W. Damascus Road in Oak Ridge.

Harris

25 YEARS

Robert E. Purkey, Harry E. Seagren, Ralph H. Jones, Richard F. Kimball, Graydon D. Whitman, James F. Land, Ernest W. Davis, Robert M. Simmons, Roy W. Webber, Burlon G. Green, Blaine Ward.

20 YEARS

Leroy B. Yeatts Jr., Wilbur F. Schaffer Jr., Wallace R. Gambill, James W. McNeillie, Philip S. Baker, John L. Redford, Jay W. Reynolds, Allen E. Richt, William R. Winsbro, Thomas G. Hill, Eugene H. Waters, Frances M. Burkhalter, Roy E. Thoma Jr., Charles S. Yust, Russell G. Jenness, Joel A. Carter, Paul J. Connelly, Don R. Hodges, Garner W. Henley, Geraldine O. Brown, William H. Hicks, Robert A. McNees Jr., Martha R. Childs, Louise E. Ferguson.

Y-12 PLANT

25 YEARS

Julius J. Holzknecht Jr., Frances M. Smith, Charles J. Buchanan, Forrest E. McKeethan, Thomas Chambers Jr., Conard R. Roberts.

20 YEARS

Harmon G. Smith, Max J. Bezik, Walter R. Clevenger, Eugene L. King, William G. Rains, Lawrence E. Graham, David Gillespie Jr., Samuel A. Gibbs, J. Sewell Brown Jr., David R. Alford III, Richard S. Phillips, Gordon A. Grooms, Harold W. Zang, Gene McWilliams, Robert E. Stubblefield Jr., Henry R. King, C. Kenneth Valentine, James W. Hodges.

Bioengineer film topic of July 18's colloquium

ORNL will hold its third colloquium on July 18 at 7:30 p.m. at the Jefferson Junior High auditorium.

The first part of the program will be the first Laboratory screening of **The Bioengineers,** a film recently prepared by the ORNL Motion Picture Department. In a fast-paced, contemporary motion picture designed to inform a popular level audience about a few of our accomplishments in bioengineering. Following the film, Laboratory Director Alvin M. Weinberg will speak.

Refreshments will be served following the meeting. The colloquium is planned for staff members and badges will be required for admittance.

Overseas assignment listed for ORNL staff

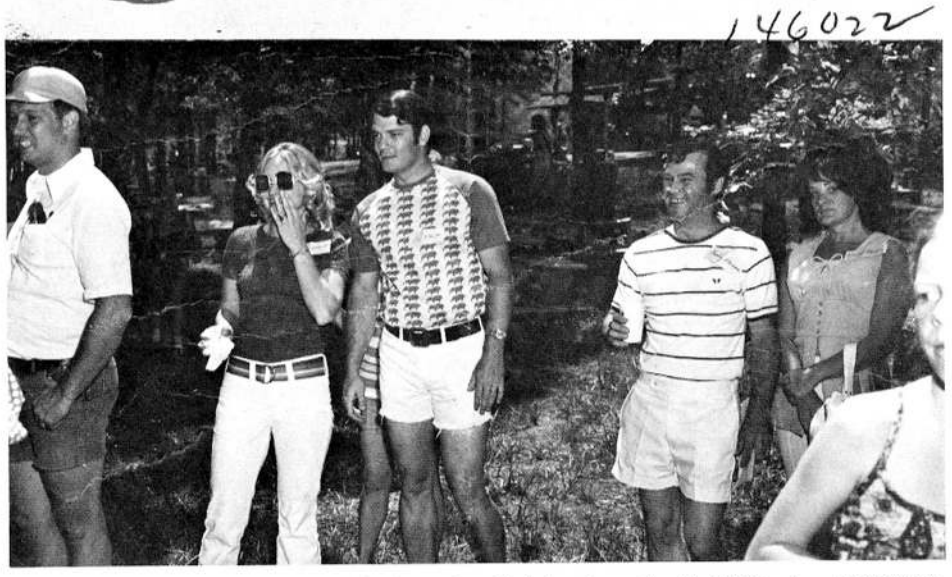
Three ORNL staff members are leaving during the last of June for foreign assignments.

Richard L. Hahn, chemist in the Chemistry Division, will spend approximately one year in France at the Institute of Nuclear Physics at Orsay, Paris-Sud University. He will collaborate with his colleagues there in heavy-ion nuclear physics and chemistry research. From June 26-July 1 he will attend the European Nuclear Physics Conference at Aix-en-Provence to present two papers "Heavy-Ion Nuclear Reactions" and "New Osmium Nuclei Far From Stability." While in Europe he plans to visit several other laboratories to discuss heavy-element and heavy-ion research.

William B. Dress Jr. and Philip D. Miller will begin approximately 15-month assignments at the High Flux Reactor, Institute Laue-Langevin, Grenoble, France. Both are physicists in Physics Division. Miller will be devoting full time to the electric dipole experiment. Dress will assist him but also join others at the Institute in looking for two gamma-ray emmissions following (n,p) capture.

MILITARY SERVICE

Since January 1, 1957, men and women in the uniformed services, whether on active duty or in active training, have been covered by social security in just the same way as employees in private industry.



ENGINEERING PICNIC—The Engineering Division from the Y-12 Plant and ORGDP recently enjoyed a picnic at the Clark Center Recreation Park. Food and all the outdoor activities of the park were enjoyed.

SPORTS NOTES

ALL CARBIDE

Softball standings through June 8:

Team	W	L
Red Barons	5	0
All Stars	5	0
Snakes	5	1
The Gang	4	1
Computes	3	1
Knights	3	1
Hornets	5	2
Bucanneers	4	2
Ecology	4	2
Colts	3	2
Losers	3	2
Biology Rejects	3	2
Underdogs	2	2
Energetics	3	3
Supersonics	4	4
Thermos	2	6
Bombers	1	3
Playmakers	1	4
Trojans	1	4
Centaurs	1	5
Ridgerunners	0	4
Raiders	0	5
A-Wingers	0	6

Table Tennis wound up the season recently with Jerry Goldstein atop the Y League and Roy Huddleston the champ in the X League.

Alvey-Dorr and Hill-Rayer share the lead in the Lakeside Golf League with George-Baker. The three teams are two points ahead of the Crowder-Emery duo.

Charlie Baxter and Ed Sise fired a recent low in the Shift League . . . and The Collins brothers and the Dick-Wheeler pair share the lead in standings.

Tipton-Watkins have a commanding lead in the South Hills Golf League over the two Cases.

In the Southwest Point Carbide League Schilling-Hunley are three out in front of Moore-Butler-Battle-Chapman and Stanton-Mundt.

Y-12 GOLF

Bowling ace Bill Ladd proved himself in another sport recently, firing a hole-in-one on golf greens, June 2. Using a seven iron, the Y-12er aced hole number 2 at the Emory Golf Club. Playing in a foursome with fellow Carbiders, Ladd counted the first ace of his career.

Bill Ladd

Playing alongside the sportsman were Ken Cook, Wade Roberts and Jim Loupe.

ORNL GOLF

Paul Easter

Paul Easter, ORNL Material Services, picked up an ace on the Harriman Golf Course recently, firing a hole-in-one on number two, a 185-yard hole.

He used a three wood. Fellow Carbider D. A. Robinson, ORGDP, was an official witness to the big act.

Nuclear Division lends records group officers

The East Tennessee Chapter of the American Records Management Association recently installed new officers. The installation took place at the Alexander Motor Inn, Oak Ridge, with Mrs. Sara S. Owens, region III vice president officiating.

Kenneth B. McNabb, Y-12, was named president and Levaughn Davis, also of Y-12, was named vice president. William C. Mayers, ORGDP, was elected secretary; and C. L. Davis, Y-12, treasurer.

Board of directors include R. R. Tippy, ORGDP; Jack D. Lindsey, Y-12; Nat T. Bray, ORNL, and Myers.

Harry J. Brown, ORGDP, will edit the local newsletter for the chapter.

6-19268

Iron deficiency may be corrected

By T. A. Lincoln, M.D.

Bread, the staff of life, is going to get some additional stiffening if the recommendations now before the Food & Drug Administration are followed. White flour has been enriched with vitamins and iron for many years, but studies indicate that many adults and children still have deficient iron stores and some have chronic iron deficiency anemias. Increasing the iron supplement in flour has been recommended.

It may shock some people to learn that 10 percent to 20 percent of male and female military recruits have been found to have iron deficiency anemias. Ten percent of 15,681 children under age six brought to rural immunization clinics in Tennessee in 1967 were anemic. Several studies have found iron stores diminished to almost absent in over 50 percent of menstruating women.

Clement A. Finch, M.D., Professor of Medicine and international expert on iron deficiency, and Elaine R. Monsen, Ph.D., Professor of Nutrition at the University of Washington, made a rather startling statement in the **Journal of the American Medical Association,** March 13, 1972. They said, "Some 5,000,000 women in the United States probably have iron deficiency, and perhaps five times that number are iron deficient in respect to iron stores."

Seventy percent of the iron stores of the body is functional, while the remainder is storage or nonessential iron. Eighty percent of the functional iron is found in the red blood cells as hemoglobin and the rest is in enzymes and myoglobin, a muscle protein.

Iron loss small

Remarkably little iron is lost from the body. Radioisotope studies using iron-55 have shown that the daily loss from the gastrointestinal tract is only .1 mg in discarded epithelial cells and .4 mg in blood. Small amounts are lost in the urine and in worn-out skin cells which are rubbed off each day. Because of these extremely small losses, men require little iron in their food. They are said to be in iron balance if they absorb .5 to 1 mg from their food each day.

In women and children, the story is altogether different. Women lose varying amounts during their menstrual periods. The average is about 50 ml of blood per period, or about an equivalent of .5 mg iron per day averaged out over the 28-day cycle. To keep in iron balance, a woman having menstrual periods must absorb about 2 mg of iron each day. During a pregnancy, the requirements are much higher. Infants and children have much higher iron requirements than adults because of their growth needs.

Diet stumbling block

The intestine has the remarkable capacity to regulate the amount of iron absorbed. When the need is great, as when the iron stores are low, absorption is increased. The normal adult man has about 1 gram in storage, while a menstruating woman has only about .3 gram. A man absorbs only about 5 percent, or about .8 mg. of the iron in an average diet, which contains about 16 mg per day. A woman absorbs about 13 percent, or about 1.3 mg, from a diet of 10 mg per day. The principal source of iron in the diet is meat, although green leafy vegetables and beans are also important.

The diet is nevertheless the stumbling block. There are about 6 mg of iron per 1,000 calories in the usual American diet. Sedentary men consume 2,500 to 3,500 calories a day and absorb about 1 mg, so usually get adequate iron. Any man who does not eat enough meat or vegetables may be deficient. Women who try to remain slim frequently consume 1,500 to 2,000 calories per day, or about 10 mg of iron. If they absorb only 1.3 mg. their intake is obviously borderline, since 2 mg is the desired level. If the menstrual flow is excessive or the diet deficient in meat, a mild deficiency may occur.

Cleaner food—less iron

There are two additional factors which influence iron intake. Foods cooked in cast iron cookware contain more iron. For example, spaghetti sauce cooked for three hours contains about 87 mg of iron per 100 grams of sauce, while if cooked in glass, only 3 mg. Cast iron is being replaced by glass, aluminum, and teflon coated cookware. In addition, processed foods tend to be much cleaner and therefore contain less iron. Raw vegetables taken out of the garden and not too thoroughly washed have considerably more iron.

At present, about 20 percent of the iron intake for women comes from the present level of fortification of flour and cereals. An iron deficient person absorbs about .3 mg from this supplemental iron. If the level of fortification is increased from the present 13 to 16 mg per pound of flour to 35 to 40 mg per pound, and extended to all articles derived from flour, the average deficient woman will receive 6 mg per day and will absorb an additional .8 mg, which should correct most marginal deficiencies.

Enriching flour

Iron deficiency results in a mild anemia which usually doesn't produce symptoms. The reason for concern is that in children, moderate anemia can become serious when an infection is superimposed. There is less resistance to infection and when one occurs, children with anemia are sicker and develop more complications. Adult women may also show less resistance to infections and may have more fatigue.

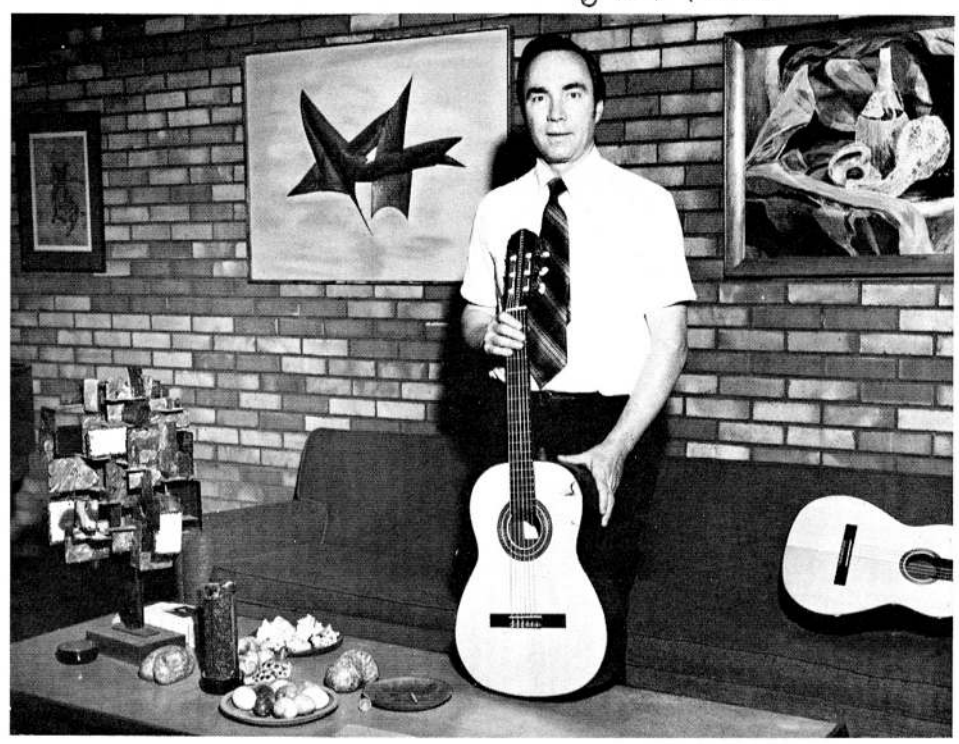
Fortifying flour with iron makes more sense than prescribing expensive iron tonics. Individuals with the iron storage disease, hemochromatosis, may need to avoid iron enriched flour, but they are fortunately rare. Since 25 percent of the total calories consumed in the United States is derived from grain products, enrichment of flour seems to be an excellent public health measure.

Cochran takes award for patriotism in ROTC

Curt A. Cochran, son of Howard Cochran of ORNL's Instrumentation and Controls Division, was one of 43 cadets recognized for special awards at Middle Tennessee State University's Annual ROTC Awards Day. The awards were made by patriotic organizations with interests related to patriotism.

Cadet Cochran received the American Legion Silver Award for military excellence and a commendation ribbon.

Cochran is a junior at MTSU and a graduate of Roane County High School.



THE COMPLEAT ARTIST—John N. Turpin, Y-12's Metal Preparation Division, shows a handmade guitar he recently completed. The copper sculpture on the table and the sculptured painting at his right are his own creations. Even his domicile in Oak Ridge is self-designed.

Id-building handicrafts get the endorsement of local versatile chemical engineer-hobbyist

"Creative hobbies do more for the id than they do for the purse," says Y-12's John N. Turpin. "I never saw a man who has a handicraft hobby that was unkind or cruel. Creating with the hands is like fine music, it soothes away a lot of our ills."

Making guitars and dulcimers has been a hobby of Turpin's for more than 10 years. He got started making dulcimers in his native Chattanooga and began making Spanish and classic guitars after coming to the Oak Ridge area in 1954. (The mountaineer version of the dulcimer entails stretching metal strings over a peculiarly shaped sounding board. The strings are then fretted with a goose or turkey quill. This is an adaptation of the European dulcimer which is struck with small hammers.

Designed own home

Making musical instruments is not the only talent possessed by the multifaceted Y-12er. He personally designed his beautiful home in Oak Ridge. The brick, glass and redwood structure sits on an "unlandscaped" corner lot at 895 West Outer Drive. "We like the feel of the natural woods around us," he states. The east and west walls of the home are solid bricks without windows. The enormous living room gives the appearance of being very high.

Many of the art objects around the house were created by Turpin also. Over the doorway hangs a copper sculpture of a barracuda, and breaking the vast empty space over the foyer is a huge permanent mobile fabricated from scraps during the construction of the house.

Most of the work Turpin does on his musical instruments, however, is done in a workshop under the garage he built himself. "Laying brick is easy if someone will show you how to mix mortar and you follow a strict pattern."

Literature limited

Making a guitar takes about 40 hours, but you can make two in about 60. Materials include wood (mahogany, rosewood, walnut and other hard woods) and glue.

"First you read all there is to read on the instruments. Unfortunately, there are only two good books on guitar-making, and one of them is in German," laments the chemical engineer. Having a feel for music helps, too, Turpin adds, even though he himself does not play an instrument.

Mrs. Turpin, the former Peggy Ballard, teaches swimming to handicapped children at the Daniel Arthur Rehabilitation Center. "Her spare time is rather limited," Turpin adds quickly. "We have four children, and we like to emphasize creative expression among them, too. We feel it highly important to their development."

The Georgia Tech graduate is in Alpha Five Processing in Y-12's Metal Preparation Division.

Jaycees elect division men as 1972 officials

Six Nuclear Division men have been elected officers in the Oak Ridge Jaycees. Bill Williams, Employment, Y-12, has been named president. Other officers include Chuck Stevenson, Y-12 Production Analysis, external vice president; Bob Presley, Y-12 Product Engineering, state director; T. R. Williams, ORGDP Separations, internal director; Tom Cabe, Y-12 Materials Testing Support, external director; and Lee Spender, Y-12 Data Processing, internal director.

OSHS faculty selects Hall son for Boys State

Luther Stanley Hall Jr. has been selected by the faculty of Oliver Springs High School to represent the school at the annual Boys State, held at Tennessee Technological University, June 11-17.

Hall

Stanley has a B average for his first three years in high school, is a member of the Beta Club, and is active in the VICA Club, Bible Club and Pep Club.

His parents are Mr. and Mrs. Luther S. Hall Sr., Oliver Springs. His father is in Y-12's Fabrication Systems Development, G-3 Shop.

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CALENDAR of EVENTS

TECHNICAL

June 23

Biology Division Seminar: "Spindle Structure and Chromosome Movement," R. Dietz, Max-Planck-Institute fur Zellbiologie, Tubingen, Germany. Large Conference Room, Building 9207, Y-12, 12:15 p.m.

Health Physics Division Seminar: "Translation Spectroscopy of H^- Produced by Collisions by H^+ on Various Targets," Jacqueline Appell, Collisions Ioniques, Laboratoire de Physico — Chimie Des Rayonnements, 91-Orsay France. East Auditorium, Building 4500N, 10 a.m.

June 23-30

ORNL Heavy-Ion Summer Study: Session each day, Central Auditorium, Building 4500N, 9 a.m. (Beginning June 26, East Auditorium, Building 4500N.)

June 27

Biomedical Graduate School Seminar: "Regulation of Sugar Transport," William Wiley, Batelle Memorial Institute. Small Conference Room, Building 9207, 3 p.m.

June 28

Metals & Ceramics Division Seminar: "Biomedical Materials," Jack Lemons, University of Alabama Medical Center. East Auditorium, Bldg. 4500N, 2:30 p.m.

Oak Ridge Summer Lecture Program: "Technology: Master, Slave, or Partner?" Elliot S. Pierce. Oak Ridge Playhouse, 7 p.m.

July 5

Oak Ridge Summer Lecture Program: "Toward a National Energy Policy: Implications for the 70's," Eric Hirst and Don Steiner. Oak Ridge Playhouse, 7 p.m.

July 6

Gas-Cooled Reactor and Thorium Utilization Programs Information Meeting: "Transport of Cs in the Fission Product Deposition Loop," M. D. Silverman; "HTGR Fuel Recycle Process Evaluation Studies," J. W. Anderson; "Correlating Results from 5-in.-Diameter Coater Runs," W. H. Pechin. East Auditorium, Building 4500N, 9 a.m.

July 12

Oak Ridge Summer Lecture Program: "The University Isotope Separator — Oak Ridge (Unisor): A New Cooperative Venture," Melvin M. Ketchel. Oak Ridge Playhouse, 7 p.m.

Metals and Ceramics Division Seminar: "Analytical Capabilities of the Service Laboratories," J. H. Cooper and C. E. Lamb. East Auditorium, Building 4500N, 2:30 p.m.

COMMUNITY

July 4

Karns Lions Club Picnic: 12 noon until everyone is fed. Karns Community Pool. $1.50 for ribs, chicken plate. Supervising chef: Y-12er Clifford Nicely.

Daughter of ORNLer aids space program

Mrs. Jeanette Denny Jones, the first woman to receive a degree in civil engineering at The University of Tennessee, is now the highest ranking woman at the Kennedy Space Center in Florida, where she is an aerospace technologist. She is the daughter of Steve K. Denny of ORNL's General Engineering Division.

Mrs. Jones is assigned to technical management for NASA's information system directorate. Her duties include helping to plan budgets and manpower for launches and related activities.

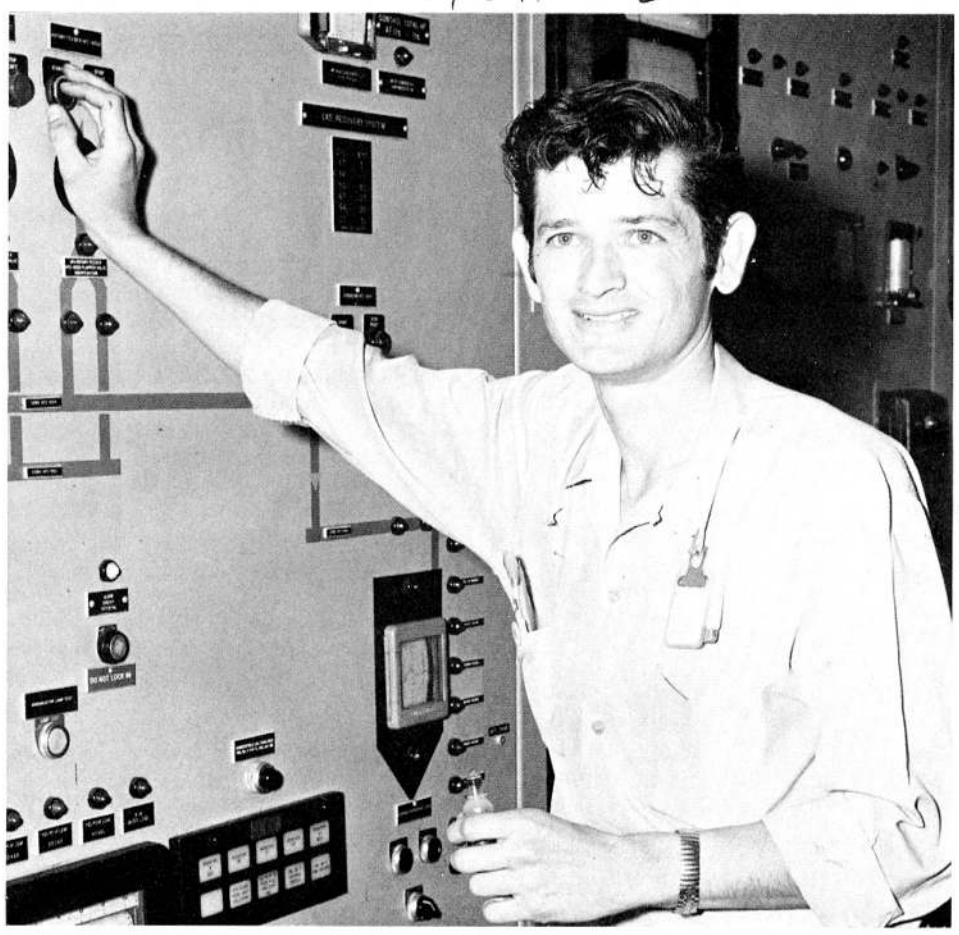
Mrs. Jones was employed at ORNL in the early sixties before joining NASA.

DIVIDEND

The ORNL Credit Union will be closed on July 4. A second quarter dividend of

6%

will be paid to all share accounts. If you do not receive a second quarter statement by the end of July, please contact the Supervisory Committee, P. O. Box 701, Oak Ridge.



SUFFERS PAINFUL FALL—In an effort to push his three-year-old daughter away from danger, Paducah's Thomas V. Bateman came up with a fractured pelvis in a fall from a horse's back.

Fall from horseback brings very painful injury to Paducahan who offers riders sage advice

"Horseback riding is a lot of fun; but, believe me, an injury is not," says Thomas V. Bateman, of the Paducah Plant's Operations Department.

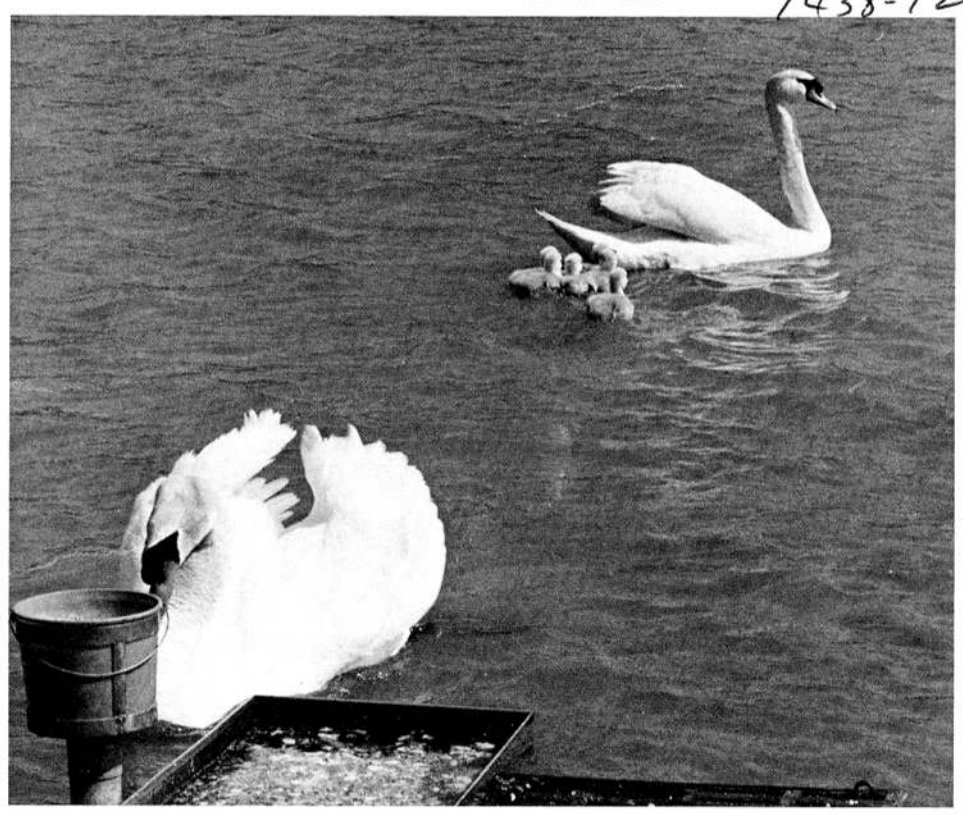
A total of 76 days away from the job is the cost of a fall Bateman took last year from the back of a horse, not counting a painful injury.

He had just purchased the animal and was riding, holding his small daughter. The horse suddenly reared and fell backward. As the horse fell, Bateman slid off in a standing position and pushed his daughter clear. He was knocked to the ground and the horse fell across his waist.

A fractured pelvis and other internal injuries were the price of falling from the spirited steed.

"Always put a chin strap on a horse that has a habit of throwing his head," Bateman advises, "The threat to my daughter and my own safety made a believer out of me."

Domestic animals need man's assistance in being completely safe, Bateman stated. No matter how gentle they are, man has to assume the role of leader in thinking safety for them, as well as himself. "Take the proper precautions before getting on a horse," Bateman said.



EIGHT SWANS A'SWIMMING — Six cygnets were hatched recently to the proud parents, "Y" and "Not," and are on their shakedown cruise in ORIC Lake at ORNL. "Y" and "Not" were imported from Holland in 1965 after Operation Y-Not, headed by Physics Division's Frances Pleasonton, solicited donations to cover the purchase price. This brings the total number of swans hatched to 20 since 1968 when "Y" and "Not" reached maturity. The cygnets will be gliding around ORIC Lake until they are "pushed from the nest." Then they will be sold or given to zoos. Many thanks to ORNL photographer Bill Norris who took the 1972 swan portraits under attack from the male swan.